ENTERED

- [ ] Changed a file from non-ASCII to ASCII

- [ ] Changed the margins in cases where the sequence text was "wrapped" down to the next line.

- [ ] Edited a format error in the Current Application Data section, specifically:
_____

- [ ] Edited the Current Application Data section with the actual current number. The number inputted by the applicant was [ ] the prior application data; or [ ] other _____.

- [ ] Added the mandatory heading and subheadings for "Current Application Data".

- [ ] Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.

- [ ] Changed the spelling of a mandatory field (the headings or subheadings), specifically:
_____

- [ ] Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were:
_____

- [ ] Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:
_____

- [ ] Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.

- [ ] Inserted colons after headings/subheadings. Headings edited included:
_____

- [ ] Deleted extra, invalid, headings used by an applicant, specifically:
_____

- [x] Deleted: [x] non-ASCII "garbage" at the beginning/end of files; [ ] secretary initials/filename at end of file; [ ] page numbers throughout text; [ ] other invalid text, such as _____.

- [ ] Inserted mandatory headings, specifically: _____

- [ ] Corrected an obvious error in the response, specifically:
_____

- [ ] Edited identifiers where upper case is used but lower case is required, or vice versa.

- [ ] Corrected an error in the Number of Sequences field, specifically:
_____

- [ ] A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.

- [ ] Deleted *ending* stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____

- [ ] Other:
_____
_____

*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form. 3/1/95
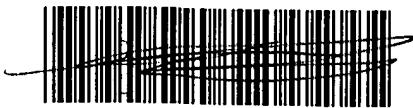
OIPE

RAW SEQUENCE LISTING   DATE: 02/28/2002
PATENT APPLICATION: US/10/057,311   TIME: 18:38:29

Input Set : **A:\PTO.AMC.txt**
Output Set: **N:\CRF3\02282002\J057311.raw**

```
   5 <110> APPLICANT: Junghans, Claas
   7         Wittig, Burghardt
   9         Knig Merediz, Sven
  11         Schroff, Matthias
  15 <120> TITLE OF INVENTION: Covalently Closed Nucleic Acid Molecules for
Immunostimulation
  19 <130> FILE REFERENCE: NHL-NP-37
C--> 23 <140> CURRENT APPLICATION NUMBER: US/10/057,311
C--> 25 <141> CURRENT FILING DATE: 2002-01-24
  29 <150> PRIOR APPLICATION NUMBER: PCT/DE00/00565
  31 <151> PRIOR FILING DATE: 2000-02-24
  35 <150> PRIOR APPLICATION NUMBER: DE19935756
  37 <151> PRIOR FILING DATE: 1999-07-27
  41 <160> NUMBER OF SEQ ID NOS: 15
  45 <170> SOFTWARE: PatentIn version 3.1
  49 <210> SEQ ID NO: 1
  51 <211> LENGTH: 18
  53 <212> TYPE: DNA
  55 <213> ORGANISM: Artificial Sequence
  59 <220> FEATURE:
  61 <223> OTHER INFORMATION: Synthetic Construct
  63 <220> FEATURE:
  65 <221> NAME/KEY: misc_feature
  67 <222> LOCATION: (1)..(18)
  69 <223> OTHER INFORMATION: Base sequence
  73 <400> SEQUENCE: 1
  74 aacgttcttc ggggcgtt                                               18
  77 <210> SEQ ID NO: 2
  79 <211> LENGTH: 48
  81 <212> TYPE: DNA
  83 <213> ORGANISM: Artificial Sequence
  87 <220> FEATURE:
  89 <223> OTHER INFORMATION: Synthetic Construct
  91 <220> FEATURE:
  93 <221> NAME/KEY: misc_feature
  95 <222> LOCATION: (1)..(48)
  97 <223> OTHER INFORMATION: Mini sequence: circular single-stranded with stem loop
structure
  98         (dumbbell), all phosphodiester
 102 <400> SEQUENCE: 2
 103 gttcctggag acgttcttag gaacgttctc cttgacgttg gagagaac              48
 106 <210> SEQ ID NO: 3
 108 <211> LENGTH: 60
 110 <212> TYPE: DNA
```

112 <213> ORGANISM: Artificial Sequence

RAW SEQUENCE LISTING   DATE: 02/28/2002
PATENT APPLICATION: US/10/057,311   TIME: 18:38:29

Input Set : **A:\PTO.AMC.txt**
Output Set: **N:\CRF3\02282002\J057311.raw**

```
116 <220> FEATURE:
118 <223> OTHER INFORMATION: Synthetic Construct
120 <220> FEATURE:
122 <221> NAME/KEY: misc_feature
124 <222> LOCATION: (1)..(60)
126 <223> OTHER INFORMATION: AT-2L sequence: circular single-stranded with stem loop
structure
127        (dumbbell), all phosphodiester
131 <400> SEQUENCE: 3
132 accttccttg tactaacgtt gcctcaagga aggttgatct tcataacgtt gcctagatca        60
135 <210> SEQ ID NO: 4
137 <211> LENGTH: 116
139 <212> TYPE: DNA
141 <213> ORGANISM: Artificial Sequence
145 <220> FEATURE:
147 <223> OTHER INFORMATION: Synthetic Construct
149 <220> FEATURE:
151 <221> NAME/KEY: misc_feature
153 <222> LOCATION: (1)..(116)
155 <223> OTHER INFORMATION: ISS30 sequence: circular single-stranded with stem loop
structure
156        (dumbbell), all phosphodiester
160 <400> SEQUENCE: 4
161 cctaggggtt accaccttca ttggaaaacg ttcttcgggg cgttcttagg tggtaacccc        60
163 tagggttac caccttcatt ggaaaacgtt cttcggggcg ttcttaggtg gtaacc         116
171 <210> SEQ ID NO: 5
173 <211> LENGTH: 58
175 <212> TYPE: DNA
177 <213> ORGANISM: Artificial Sequence
181 <220> FEATURE:
183 <223> OTHER INFORMATION: Synthetic Construct
185 <220> FEATURE:
187 <221> NAME/KEY: misc_feature
189 <222> LOCATION: (1)..(58)
191 <223> OTHER INFORMATION: 5'-phosphorylated oligodeoxyribonucleotide
195 <400> SEQUENCE: 5
196 cctaggggtt accaccttca ttggaaaacg ttcttcgggg cgttcttagg tggtaacc         58
199 <210> SEQ ID NO: 6
201 <211> LENGTH: 114
203 <212> TYPE: DNA
205 <213> ORGANISM: Artificial Sequence
209 <220> FEATURE:
211 <223> OTHER INFORMATION: Synthetic Construct
213 <220> FEATURE:
215 <221> NAME/KEY: misc_feature
217 <222> LOCATION: (1)..(114)
219 <223> OTHER INFORMATION: ISS30-ds sequence: circular single-stranded with stem loop
struct
220        ure (dumbbell), all phosphodiester
224 <400> SEQUENCE: 6
225 tcttcggggc gttctttact aggtcctctc caggttacca cctaagaacg ccccgaagaa        60
227 cgttttccaa tgatactagg tcctctccag gttaccacct tcattggaaa acgt          114
```

RAW SEQUENCE LISTING   DATE: 02/28/2002
PATENT APPLICATION: US/10/057,311   TIME: 18:38:29

            Input Set : A:\PTO.AMC.txt
            Output Set: N:\CRF3\02282002\J057311.raw

230 <210> SEQ ID NO: 7
232 <211> LENGTH: 68
234 <212> TYPE: DNA
236 <213> ORGANISM: Artificial Sequence
240 <220> FEATURE:
242 <223> OTHER INFORMATION: Synthetic Construct
244 <220> FEATURE:
246 <221> NAME/KEY: misc_feature
248 <222> LOCATION: (1)..(68)
250 <223> OTHER INFORMATION: ISS30-sl sequence: circular single-stranded with stem loop
struct
251   ure (dumbbell), all phosphodiester
255 <400> SEQUENCE: 7
256 tcttcggggc gttctttttt aagaacgccc cgaagaacgt tttccaatga tttttcattg   60
258 gaaaacgt   68
261 <210> SEQ ID NO: 8
263 <211> LENGTH: 82
265 <212> TYPE: DNA
267 <213> ORGANISM: Artificial Sequence
271 <220> FEATURE:
273 <223> OTHER INFORMATION: Synthetic Construct
275 <220> FEATURE:
277 <221> NAME/KEY: misc_feature
279 <222> LOCATION: (1)..(82)
281 <223> OTHER INFORMATION: ISS13 sequence: circular single-stranded with stem loop
structure
282   (dumbbell), all phosphodiester
286 <400> SEQUENCE: 8
287 cctaggggtt accacctaac gttcttcggg aggtggtaac ccctaggggt taccacctaa   60
289 cgttcttcgg gaggtggtaa cc   82
292 <210> SEQ ID NO: 9
294 <211> LENGTH: 60
296 <212> TYPE: DNA
298 <213> ORGANISM: Artificial Sequence
302 <220> FEATURE:
304 <223> OTHER INFORMATION: Synthetic Construct
306 <220> FEATURE:
308 <221> NAME/KEY: misc_feature
310 <222> LOCATION: (1)..(60)
312 <223> OTHER INFORMATION: AT-1L sequence: circular single-stranded with stem loop
structure
313   (dumbbell), all phosphodiester
317 <400> SEQUENCE: 9
318 cttccttgta ctaaccttgc ctcaaggaag gttgatcttc ataacgttgc ctagatcaac   60
321 <210> SEQ ID NO: 10
323 <211> LENGTH: 30
325 <212> TYPE: DNA
327 <213> ORGANISM: Artificial Sequence
331 <220> FEATURE:
333 <223> OTHER INFORMATION: Synthetic Construct
335 <220> FEATURE:
337 <221> NAME/KEY: misc_feature

RAW SEQUENCE LISTING   DATE: 02/28/2002
PATENT APPLICATION: US/10/057,311   TIME: 18:38:29

Input Set : **A:\PTO.AMC.txt**
Output Set: **N:\CRF3\02282002\J057311.raw**

```
339 <222> LOCATION: (1)..(30)
341 <223> OTHER INFORMATION: ISS30-IPS sequence: linear single-stranded sequence, first
five a
342        nd last three phosphoester linkages by thioate
346 <400> SEQUENCE: 10
347 tcattggaaa acgttcttcg gggcgttctt                                    30
350 <210> SEQ ID NO: 11
352 <211> LENGTH: 30
354 <212> TYPE: DNA
356 <213> ORGANISM: Artificial Sequence
360 <220> FEATURE:
362 <223> OTHER INFORMATION: Synthetic Construct
364 <220> FEATURE:
366 <221> NAME/KEY: misc_feature
368 <222> LOCATION: (1)..(30)
370 <223> OTHER INFORMATION: ISS30-I sequence: linear single-stranded sequence, all
phosphodie
371        ster
375 <400> SEQUENCE: 11
376 tcattggaaa acgttcttcg gggcgttctt                                    30
379 <210> SEQ ID NO: 12
381 <211> LENGTH: 30
383 <212> TYPE: DNA
385 <213> ORGANISM: Artificial Sequence
389 <220> FEATURE:
391 <223> OTHER INFORMATION: Synthetic Construct
393 <220> FEATURE:
395 <221> NAME/KEY: misc_feature
397 <222> LOCATION: (1)..(30)
399 <223> OTHER INFORMATION: AT-PS sequence: linear single-stranded sequence, first five
and l
400        ast three phosphoester linkages by thioate
404 <400> SEQUENCE: 12
405 gttgcctaga tcaacgttcc ttgtactaac                                    30
408 <210> SEQ ID NO: 13
410 <211> LENGTH: 116
412 <212> TYPE: DNA
414 <213> ORGANISM: Artificial Sequence
418 <220> FEATURE:
420 <223> OTHER INFORMATION: Synthetic Construct
422 <220> FEATURE:
424 <221> NAME/KEY: misc_feature
426 <222> LOCATION: (1)..(116)
428 <223> OTHER INFORMATION: NoSS30 sequence: circular single-stranded with stem loop
structur
429        e (dumbbell), all phosphodiester
433 <400> SEQUENCE: 13
434 cctaggggtt accaccttca ttggaaaacc ttcttagggg tgttcttagg tggtaacccc   60
436 taggggttac caccttcatt ggaaaacctt cttaggggtg ttcttaggtg gtaacc      116
439 <210> SEQ ID NO: 14
441 <211> LENGTH: 35
443 <212> TYPE: DNA
445 <213> ORGANISM: Artificial Sequence
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RAW SEQUENCE LISTING   DATE: 02/28/2002
PATENT APPLICATION: US/10/057,311   TIME: 18:38:29

Input Set : **A:\PTO.AMC.txt**
Output Set: **N:\CRF3\02282002\J057311.raw**

```
449 <220> FEATURE:
451.<223> OTHER INFORMATION: Synthetic Construct
453 <220> FEATURE:
455 <221> NAME/KEY: misc_feature
457 <222> LOCATION: (1)..(35)
459 <223> OTHER INFORMATION: Deoxyribonucleotide WOT-11-P
463 <400> SEQUENCE: 14
464 gaagaacgtt ttccaatgat ttttcattgg aaaac                        35
467 <210> SEQ ID NO: 15
469 <211> LENGTH: 33
471 <212> TYPE: DNA
473 <213> ORGANISM: Artificial Sequence
477 <220> FEATURE:
479 <223> OTHER INFORMATION: Synthetic Construct
481 <220> FEATURE:
483 <221> NAME/KEY: misc_feature
485 <222> LOCATION: (1)..(33)
487 <223> OTHER INFORMATION: Deoxyribonucleotide WOT-10-P
491 <400> SEQUENCE: 15
492 gttcttcggg gcgttctttt ttaagaacgc ccc                          33
```

VERIFICATION SUMMARY   DATE: 02/28/2002
PATENT APPLICATION: US/10/057,311   TIME: 18:38:30

Input Set : **A:\PTO.AMC.txt**
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L:23 M:270 C: Current Application Number differs, Replaced Current Application Number
L:25 M:271 C: Current Filing Date differs, Replaced Current Filing Date